DOI: 10.1590/1413-81232020256.28142019

Hierarchy systems of the medical field in Mexico: a sociological analysis

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Abstract *The aim of this paper is to describe the main systems of hierarchization in the Mexican medical field (and those of other similar Latin American countries). Drawing on Bourdieu's genetic structuralism, our hypothesis is that the structure of the medical field is closely correlated with the schemes of perception and appreciation of the medical field's agents. These schemes are rooted in hierarchical classifications by which work is organized and the main agents' prestige is allocated. Empirical data include focus groups, interviews and observations in hospitals, as well as images, memes and other graphic displays found in Facebook and other public internet locations. The analysis sought to identify the main systems of hierarchization that structure both the academic training and the professional practice of physicians. Four systems of hierarchization are identified: professional, by subfields, by specialties, and by division of labor. These systems of hierarchization, reciprocally entangled with one another, are part of the complex structure of positions within the medical field, as well of the agents' schemes of perception and appreciation which are embodied under the form of habitus.*

Key words *Medicine, Social hierarchy, Medical sociology*

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Introduction

Bourdieu's field theory[1] has been applied in several Anglo-Saxon and European countries to investigate the medical field (MF). Some investigations characterize the MF as a battleground between traditional and alternative medicine and modern medicine[2-5]. We also found studies that describe the structure of the field with socio-historical approaches[6-8] or with contemporary analyses[9,10]. Other studies are focused on a specific subfield such as anesthesiology[11], orthopedics[12], addiction[13], nursing[14], medical education[15], and poor medicine[16]. Some works have identified MF change based on particular events, such as the AIDS epidemic[17] or health system reforms[18]. Finally, some other address MF's functioning, focusing on decision-making processes[19] or the position of medical administrators[20].

This potential has been rarely explored in Latin America. Some very notable works on the shift from liberal medicine to institutional medicine within the MF[21] are out there, as well as various analyses on collective health[22,23]. However, no studies in Mexico or Latin America have proposed to systematically build this social microcosm from the postulates of genetic structuralism.

This paper is part of a broader investigation that aims to build the Mexican MF as a sociological object[1,24]. We have already pointed out that this is a highly hierarchical space that responds to both material (the organization of health services) and symbolic structuring (hierarchies that are established according to the prestige of specialties and educational and health institutions)[25]. We have also identified some structuring elements of the MF at the macrosocial level: its subfields, their mutual relationships, and some aspects of the hierarchy between them[26]. On a microsocial level, this paper shows new results about the different hierarchical systems of the Mexican MF.

Methods

From Bourdieu's *principle of action*[27], this paper hypothesizes that the structure of the MF corresponds to a series of schemes of perception and appreciation (SPA) from hierarchical classifications based on which work is divided, and prestige is distributed among its social actors. These SPAs correspond to a complex fabric of hierarchies incorporated in the form of habitus that organize the experiences of MF actors and predispose them to act in specific ways. We aim to study the perceptions and assessments of health personnel to identify the different hierarchical structuring systems of the MF.

To this end, we reviewed the empirical material compiled by both authors in previous research. A group of these investigations[28] studied the origin of the authoritarian medical habitus in Mexico (11 focus groups; 230 hours of observation in delivery rooms; and individual interviews with more than 20 doctors). The other research[29] documented the dehumanization of medicine in Mexico with 26 interviews with medical students, general practitioners, and medical specialists and through a virtual ethnography on Facebook from January 2015 to July 2018.

By integrating the empirical material of these investigations, this paper does not encompass what happens in a geographically or institutionally defined space, but covers the MF in a much broader way, since it gathers a very diverse sample of doctors and students interviewed. Also, it triangulates this data with material collected on Facebook, which was a significant enrichment for our findings, since the network gathers actors who are unlinked in offline life.

When the first online ethnographies were made, the internet was a space isolated from our daily lives: we accessed it only through desktop computers, and at times reserved for that purpose[30]. Now our life is embedded in the network: we have access to it at all times through mobile devices, and we have adopted social networks as technologies that keep us connected to our community so that our lives unfold in a fabric of inseparable *online* and *offline* connections[31]. This means that the user does not isolate himself from his social reality – as one used to think with the first online ethnographies – but maintains ties with people, institutions, and spaces he lives outside of the network[32]. The Internet has allowed the meeting of people who form more or less stable groups and communities and who have created new forms of sociability[33]. These groups operate in binding fashion because they reinforce the frequency of contact between geographically dispersed people and favor regular conversations between their members[34]. At the same time, the publications that are shared there also serve to model the attitudes and opinions of the users, so that cyberspace not only reflects the life that their users have outside the internet but also structures their offline experiences from the online environment.

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Memes stand out among the publications that are shared on social networks. While these have a wide range of social uses, most of them are comic devices that aim to trigger laughter. Much in the same way as jokes, memes are brief and seek to employ humor to "relativize and put some distance from tensions, discomforts, and conflicts of everyday life"[34]. Memes are cultural products that allow us to understand the social world that created them: as other comic devices, they are anchored in a specific sociocultural context and reveal to us the imaginary shared in that context[35].

With the support of the Atlas.ti software, we gathered all the transcribed materials from our previous research and the publications and memes collected from Facebook, and we recoded and reanalyzed them, with a new approach and in the light of Bourdieu's field theory. Except for one, all the statements and memes of this work are unpublished. We used pseudonyms, and fully respected the anonymity of the participants, to report the results.

Results

Hierarchical systems of the MF

Multiple hierarchical systems define the positions of actors within the MF. These structures are *incorporated* by health professionals in the form of SPA that, when studied, reveal the hierarchical systems they are operating. Let us have a look at the following statement made in a focus group:

Doctors who [teach] *in the early years* [of the medical degree] *are usually general practitioners or have a doctorate only. There are also many surgeons, but they do not treat you in the same way as they treat you at higher levels, in the final years of the course, where you run into the internist, the gastroenterologist, who are a little rougher in the way of expressing themselves, just like the surgeons.* (Anuar, student).

We can identify at least three hierarchical systems in this quotation. First, hierarchies among doctors from the clinical subfield, where specialists hold positions of much more power than general practitioners, and at the same time, among specialist doctors, those who have more prestige are surgeons and internists[26].

Second, we can observe hierarchies between some subfields of the MF. Worth highlighting is the student's *evaluation* that being both a general practitioner and having "a doctorate only" is equally a subordinate position, which shows that the high positions of the non-clinical subfields (population and biomedical subfields, where masters and doctorates can be studied instead of medical specialties[26]), concerning prestige, are not very far from the lower position of the clinical subfield (general practitioner). This shows the significant value differential that exists within the Mexican MF between the clinical setting compared to the public health and biomedical professionals.

Third, the above quotation reveals a hierarchical classification of institutions. Only low prestige actors are found in universities (because they are subordinate clinicians – general practitioners – or actors of subordinate subfields – public health professionals or scientists –); in contrast, in hospitals "you run into" more prestigious actors (surgeons, internists, gastroenterologists). Thus, a higher hierarchy of hospitals is outlined vis-à-vis educational institutions.

Furthermore, finally, in this quotation, we can assess how this complex hierarchical regimen determines the behavior of MF's social actors. The SPAs on hierarchies are translated into dispositions to act in a certain way per the actor's prestige and his current social space. Those who are holding a hegemonic position act differently depending on whether they are in the university or the hospital. As the cited student mentions: "[surgeons] do not treat you in the same way as they treat you at higher levels." Apparently, in a subordinate space (the educational institution), where their prestige is not at risk, surgeons have less aggressive behavior. However, within clinical spaces (hospitals) – which have a higher institutional hierarchy ("higher levels") because they belong to the clinical subfield – doctors tend to be "rougher in the way of expressing themselves", as they are in competition to position and legitimize themselves in the status they have reached.

This brief quotation illustrates that the MF has multiple hierarchy levels that are reproduced through SPAs that, being their product, also legitimize them. Based on the fieldwork carried out by both authors, we will now describe four hierarchical systems of the MF and the SPAs that underlie them: 1) professional hierarchies, 2) hierarchies between subfields, 3) hierarchies by specialty and 4) work hierarchies. Administrative hierarchies are also found, referred here as "rank hierarchies", which operate within hospitals and classify students and doctors in command lines[25,26,28].

Professional hierarchies

Medicine is often identified as the "queen" of the professions[36], only matched in importance by Law. This is anchored to objective data: health and law institutions are indispensable in contemporary societies, and medical and legal discourses were crucial in the construction of modern societies[37,38]. Doctors and lawyers, like priests, are moral entrepreneurs: they have the power to point out what is wrong (sickness, crime, or sin) and to establish criteria to differentiate it from what is right (health, norm, virtue)[36].

Doctors also perceive that medicine is the profession of higher hierarchy among all professions, because "*they will have human lives in their hands; it will not be any job*" (Renato, neurosurgeon). This assessment of superiority allows the emergence of ridicule towards other professions, as shown in Figure 1, a Facebook publication that discredits architecture when compared to medicine.

Medical students are socialized about this hierarchy from their first training years:

We had an excellent Biochemistry professor, but if suddenly three or four were failed, he started to say: "why are you here? Go to Tourism, choose another career, why are you wasting your time?" (Marlene, resident).

The discrediting of the other professions against medicine also manifests itself with the evaluation that, unlike other professions, medicine requires exceptional dedication and, in return, has rewards not provided by other professions:

Although I may like other things a lot, I can do everything else whenever I want because it is a hobby, but what I like, I love the hospital, to see patients, surgeries and when the patient comes to you and sincerely thanks you: nobody can take this away from me. (Irma, student).

The supposed superiority of medicine over other professions – considered "light" – also relates to the expectations of medical students:

Since before entering, when they say 'I am going to study medicine', they are asked 'and what are you going to specialize in?' That does not happen to a "light"; it does not happen to a Marketing student or an Engineer. They don't say, "What do you study? – Business Administration – Oh, and what will your master's degree be on?". However, to us, they do. (Tamara, student).

When evolving from the liberal medicine of yesteryear to the current institutional medicine, the former general practitioner who attended at home was replaced, also in the collective imaginary about medicine, by their underpinning specializations and hierarchies[21,39]. That is why it is so common, as shown in this quotation, that a medical student is asked, unlike students in other careers, what he will specialize in. It is not only a symbolic order within the profession, but it is an order with objective material bases. The previous quotation shows that the doctors' belief in the superiority of medicine is founded unknowingly in a historical process of change of the profession linked to very complex socio-political and economic processes, typical of the second half of the twentieth century, instead of a supposed condition of intrinsic superiority to this profession.

The perception of the superiority of medicine is also maintained among paramedical professions. Some papers have documented how the hierarchy of doctors is imposed on other health professionals in the hospital context. For example, during visiting rounds, doctors only address nurses, dieticians, or physiotherapists to ask for information about patients or to issue orders, and systematically ignore their unsolicited comments[40]. We observe that these hierarchies among the health professions are replicated within the Mexican MF:

In the [university], *the first semesters you take classes with the common branch, which is all health sciences, then nurses, graduates in sports, nutrition, medicine are blended, all are together in the groups. Moreover, the teachers say: "Let's see how*

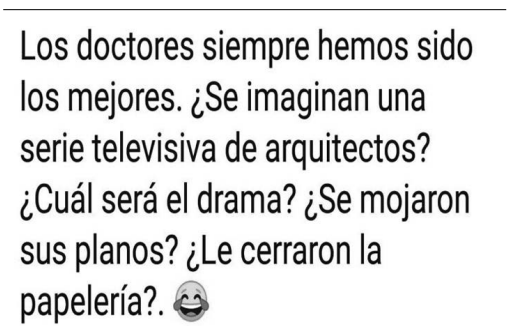

Figure 1. Professional hierarchies.

Caption: We doctors have always been the best. Can you imagine a TV Series with architects? What would the drama be? Their drawings got wet? The stationery shops have closed down?"

Source: Facebook.

many doctors are there?", and you raise your hand. "Ah, then the class is going to get along like this, and those who do not understand, you, the others, please investigate it", as if saying that others are idiots [...] *and the classmates believe it, and begin to see the nurses like yuck, and nutritionists as frustrated.* (Valentina, general practitioner).

In the MF, the nursing staff holds a subordinate position to the doctors recruited by the hospital, but not vis-à-vis the medical students. In the hospital's chain of command[28], medical students hold the lowest position among doctors, so nurses can position themselves above them by pointing out their mistakes. This is what the meme in Figure 2 refers to, which illustrates a nurse showing that a student was "contaminated" during surgery by touching non-sterilized objects:

The text of this image misspells the phrase "doctor, the intern [medical student] got contaminated". The way in which the phrase is written points to a sense of superiority of the students over the nurse (who, it is assumed, speaks lower-class Spanish), which corresponds to the professional hierarchies within the MF, despite the fact that at that moment she can exercise power over the student and position herself above him. Also, the fact that the nurse is represented by the Joker – iconic rival of the superhero Batman – symbolically reveals the rivalry between nursing staff and doctors in the MF.

Figure 2. Nursing as a subaltern paramedical profession.

Source: Facebook.

Hierarchies between subfields

The hierarchies between subfields are linked to the structure of the medical career's curriculum. The professional training of doctors is shared between educational and health institutions. The traditional curricula show a clear division between an initial two-year period – called primary cycles – dedicated to the study of scientific disciplines in universities, followed by another three years – clinical cycles – dedicated to studies and consolidation of clinical skills in hospitals. The division of medical education into basic and clinical cycles reflects the opposition between the clinical subfield and the subfields of modern medicine that are subordinate to it (biomedical sciences and public health[26]). These hierarchies between subfields are expressed through struggles, for example, by the preservation or modification of curricula. Recently, in some universities, the clinical approach has gained ground over the biomedical sciences taught in the primary cycles, as this fragment of one focus group with students shows:

Óscar: We were more afraid. The anatomy my dad studied is very different from the one we study. Our parents studied pure anatomy: what is on the side? What goes on above, below? Not here. This is applied anatomy, that is, you will not pass just seeing the drawings, if you don't know why, how each thing moves, or that the muscle grabs the eye like this, you are failed.

Mauricio: Yes, since the first semester we are, not with patients, but in the exam, we are already dealing with patients, we already see in a more clinical perspective.

One of the reasons of prestige assigned to the clinical subfield is to being in touch with the patients: in the previous quote, Mauricio *evaluates* this contact, even if it is only "in the exam".

A couple of decades ago, the primary cycles of the medical curriculum were reserved for the disciplines of biomedical sciences and public health, and only students who belonged to academic excellence programs had contact with the clinical subfield as of the first career years (for example, the High Academic Requirement Program of the Faculty of Medicine of UNAM). In recent years, many medical schools have reformed their curricula to include clinical subjects from the primary cycles and prepare their students better to compete for the most recognized positions within the MF (those of specialists). These movements show how the clinical subfield has been gaining ground over other subfields subaltern to it, endorsing and expanding its hegemony.

In cases in which the clinic has not permeated the primary cycles, we find that the MF's social actors move to escape the educational structure and advance contact with the clinical subfield:

In the first 2 years we looked for ways to be in touch with patients, so that they would take us to make brigades to a nearby community so that what you were learning about pathophysiology and pharmacology made more sense, and so that we could start getting head-on in medicine [...] *Being in a classroom and studying thousands of subjects, that is not medicine. Real medicine is what is applied to a patient.* (Andrés, student).

What students *appreciate* is being in touch with patients. According to their *perception*, the primary subjects (which as disciplines are part of the biomedical subfield) only make sense based on their application to the clinic, which is "the real medicine". If biomedical sciences and public health enter this social space, it is only as hegemonic clinical medicine adjuvants. Under this rationale, educational institutions are *perceived* as "the little school" and hospitals as the "real world":

The medical internship is a big jump. We come from a totally academic school of subjects, and then you face a medical world that is entirely different, that is, this is no longer the little school, this is for real [...] *Here you have to come to your tenacity, your intuition about the sufferings, the cases, the patients, and have a little control and security in you.* (Daniel, gynecologist).

In the struggles between subfields, we also find movements in which educational institutions have been gaining ground in hospitals. These movements are usually *perceived* and *appreciated* as a "weakening" of hospital rigor and the discipline that characterizes it. The following was commented in a focus group with medical specialists:

Researcher: And why has the discipline changed? Does this have to do with what you previously said, that now people are no longer trained as before?

Liliana: Because they don't allow us to punish them [the students].

Patricio: The universities have gradually taken a more active role in terms of the protection of interns [...] *Universities are now involved, and* [the students] *can no longer perform "punishment" complementary clinical practice, they can no longer be punished* [...] *everything has been relaxed.*

Daniel: And that's not right.

These findings suggest that the fight between subfields is much more intense between clinical and biomedical sciences. It seems that population health has no place in this clash between educational institutions and hospitals. Public health subjects are divided between the primary and clinical cycles and are always sidelined or below the other subjects. Population health was not even mentioned in the training experiences of the more than one hundred doctors interviewed in focus groups and individually.

Hierarchies by specialties

There are several studies on the hierarchies between medical specialties and the prestige factors associated with them[41-43]. With our fieldwork, we could identify that, from the first semesters of their professional training, medical students are exposed to messages that transmit those hierarchies, starting by making a significant difference in the level of prestige between general practitioners and medical specialists:

I still see the doctor as a very prepared guild, at least the specialists. (Armando, pediatrician).

At the same time, they are encouraged to specialize with questions such as what are they going to specialize in, directed by both their teachers and peers who create and share memes in social networks (Figure 3). This conveys the idea that specialization is the way to go, while general medicine and the subfields of population health and biomedical sciences are, in contrast, much less valued alternative paths within the MF.

These messages are also vehicles to transmit the hierarchies that exist between the specialties, including the gender-related:

When I was a freshman, the Histology teacher asked women what they were going to specialize in. They began to say Traumatology, and many other fields [...] *Then he asked who was going to be a surgeon. Several raised their hands, including me, and then he said: "Why do women want to enter surgery? They look very much tomboys wanting to be surgeons".* (Tamara, student).

Other studies have shown that hierarchies between specialties have a gender order: at the top are the specialties that involve interventions with the hands or that require physical strength and character, while at the bottom are the specialties that, in contrast, are more passive and affective, a distribution that corresponds to a male cusp and a female base[44]. In Mexico, it is common for the MF actors to use the expression *hacer manitas* ("hands-on practice") to refer to the knowledge acquired through direct experience in clinical or surgical practice, as opposed to the more in-

tellectual knowledge obtained through reading. Among Mexican doctors, it is often considered that hospital centers where more significant student intervention is allowed are better training places because that is where students acquire the *manitas* ("practice") necessary to be "good doctors". These perceptions explain that, due to its assimilation to the masculine, surgery is one of the most prestigious specialties.

The opposition between the knowledge obtained through practice and that obtained by reading also underlies the struggle between surgery and internal medicine, which is the other very prestigious specialty in Mexico[26]. A vast amount of memes circulates in social networks in which the struggles of these two medical branches are evidenced by holding the hegemonic position among medical specialties (Figures 4 and 5).

The other specialties are located under surgery and internal medicine, which allows more humorous expressions such as the following:

There is a joke that says a doctor had three children: one studied Neurosurgery and the other, more intelligent, Internal Medicine and the other: "Nah! You study gynecology." (Patricio, gynecologist).

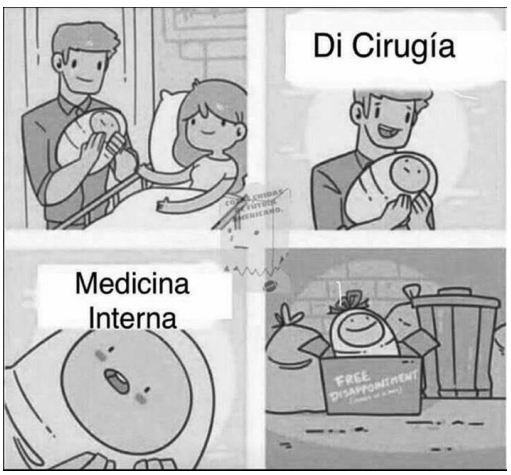

Figure 4. Surgeons' joke against internists.

Caption: "Say Surgery" – "Internal Medicine".
Source: Facebook.

Figure 3. Specialization as the most appreciated path.

Caption: Give a 'Like' if you study medicine. Comment on the specialty you like the most.
Source: Facebook.

Figure 5. Internists' joke against surgeons.

Caption: When the internist corrects all the indications of surgery.
Fuente: Facebook.

The doctors of not so prestigious specialties are defensive against these hierarchies:

[Neurosurgery] *is not at the top because, for example, the neurologist who may be an eminence takes his wife to the gynecologist. "Hey, are you going to interfere?" – "No, you take care of her, I don't want to get involved." Alternatively, the surgeon who is very good with the scalpel, for delivery, says, "no, no, no." So, maybe* [gynecology] *is a minimized specialty, but when it comes to delivery, they say "go to the gynecologist".* (Marcelo, family doctor).

However, even respecting each discipline, the hierarchies between specialties are maintained and the medical habitus – i.e., the incorporation of such hierarchical structures – provides for MF actors to act in ways that reproduce and reinforce those hierarchies:

I arrive, and they all go to one side so that I can check the patient, and everyone is waiting to see what I say, "first, let's see what the teacher says." If I say that I am going to operate him, then obviously they wait for me to finish. I believe that some unwritten hierarchy is indeed in place. (Renato, neurosurgeon).

Work hierarchies

In the MF, we also identify some hierarchical classifications based on which work is divided among doctors of different rank:

In the R2 [second year] *of gynecology, we see everything about high-risk pregnancy; it seems that it is the most demanding year because it is more responsibility and more to study, but the R1* [first year] *is more work, because you see everything about the physiological aspect, and since 80% is physiological in pregnant women, it is much work. Then, well, in the R3* [third year], *you don't see the gynecological aspect* [nothing about pregnancy], *and it's much less.* (Gabriela, gynecologist).

There is a hierarchy of the diseases by their complexity: less experienced residents (R1) are assigned the work of patients with more straightforward conditions (no-risk pregnancy), and the most trained residents (R2 and R3) are responsible for more complex pathologies (high-risk pregnancies and gynecological diseases). Some studies associate the prestige criteria of the medical specialties described above with the prestige of the diseases[45]. This hierarchy replicates the medical care levels: the work of R1 is primary medical care, while that of R2 and R3 is specialized care of the second level of care and the high-specialty of the third level of care.

However, even a patient with a high prestige disease, who belongs to a renowned specialty and is being treated in the third level of care may require interventions rarely appreciated among doctors:

As they say, there are hierarchies. The intern is the one who goes for the food, the one who does the dirty work, the one who puts the probes, cleans the wounds, and sees all the patients that nobody wants to see: diabetics, prostate patients, this is all the intern's work. Does a resident do it? No! (María Luisa, resident).

It is the junior (intern) doctors who have to do "dirty work"[46] that includes both low-profile medical procedures (i.e., probes, wound dressing) and attending less prestigious diseases, such as diabetes and prostatic hypertrophy, and also involves performing tasks unrelated to medicine, such as bringing food. Moreover, although the low-prestige procedures involve making "hands-on practice", they do not entail the heroism of surgery, so they do not have its prestige. On the contrary, in private clinics and hospitals, many of these procedures are assigned to the nursing staff, who hold a subaltern position within the MF.

Of course, dirty work is usually rarely appreciated by doctors, which in everyday life allows explanations such as the following:

We have been told that [doctors] *become insensitive or dehumanized* […] *we all have seen that, there is always a doctor like those: they come* [with the patient], *and they don't even say "good night", just "let's see, woman,* [open] *your legs", and we don't know if they do it because attending a delivery is the lowest in Gynecology, or who knows, but it really bothers them to do that kind of thing.* (Ricardo, resident).

This quote allows us to assume that less prestigious works could be more related to patient abuse. If it is true that attending births is a structurally discouraged activity (that is, not very prestigious, perhaps because it is a natural process, in contrast to the value assigned to surgical procedures), we would be at the threshold of an additional explanation about the increased number of cesarean sections; deliveries are indeed left to R1 residents, while R2, R3, and R4 enter the operating room.

When the division of labor violates any of the hierarchies involved here (i.e., the hierarchy of ranks, procedures, diseases, and levels of care), the MF actors in positions of power reestablish the order with disciplinary measures:

Once they let me into a hysterectomy [surgery to remove the uterus]. *Oh, that cost me dearly!*

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The doctor told me: "Do you want to join in for a hysterectomy?" – "Yes" – "Come in". I was going to let my resident know, but he wasn't there. As an intern, I was very happy inside, grabbing the uterus. When I left, [my resident told me]*: "What's wrong with you?! You are an intern; you are supposed to do visits. You can't participate in this surgery. This procedure is for R2, and you stole it from me, and that cannot be"* […] *So you learn that some things are for you as per your level* […] *As you advance, you assume some responsibilities, but you can't do the ones that don't apply to you. At this level, I only take samples.* (Delia, gynecologist).

Conclusions

This paper showed an analysis of the hierarchies that structure the MF beyond the scale bounded to the administrative system. Starting from the principle that the positions of agents in the field correspond to their habitus, in this work we performed an in-depth analysis of the MF to understand how the agents reflect, in their daily work, the organizing hierarchies of this social space.

By exploring the possibilities of expression that the MF allows (memes and publications in social networks, allusions made in the focus groups and interviews), we discovered a series of SPAs that rely on hierarchical classifications based on which prestige and work are distributed among the MF social actors. These SPAs – which organize the experiences of the MF actors in a correlated manner and dispose of them to act in specific ways – reveal four hierarchical systems that operate in the Mexican MF: professional, subfields, specialty, and work hierarchies. These hierarchy levels, interwoven with each other, form part of the complex position structure of the MF and the complex SPA network incorporated by its social agents in the form of habitus.

Collaborations

Both authors have contributed substantially and in equal parts in the conception and design of the study, the collection of information and its analysis, and in the writing of the article. M Villanueva conducted interviews with doctors and internet research, analyzed the materials and wrote the first version of this article. R Castro carried out observations in hospitals, interviews and focus groups and conceived the main idea (to build the CM in Mexico) and is the principal investigator of this project.

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Article submitted 28/05/2019
Approved 15/10/2019
Final version submitted 17/10/2019